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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,453	03/31/2004	Vijay Kumar Reddy	TI-37048 (1962-10800)	8048
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TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265				
EXAMINER NATALINI, JEFF WILLIAM				
ART UNIT		PAPER NUMBER		
2858				
DATE MAILED: 07/13/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	Application No. 10/814,453	Applicant(s) REDDY ET AL.	
	Examiner Jeff Natalini	Art Unit 2858	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.  
     4a) Of the above claim(s) 11-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/31/04</u> . | 6) <input type="checkbox"/> Other: ____  |

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-10, drawn to a method for processing a request to determine inputs, classified in class 324, subclass 718.
  - II. Claims 11-16, drawn to generating voltage overshoots, classified in class 327, subclass 100.
  - III. Claims 17-21, drawn to testing a device under test, classified in class 324, subclass 713.

Inventions I, II, and III are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as processing a request for a voltage overshoot or undershoot and determine a plurality of inputs. Invention II has separate utility such as generating voltage overshoots/undershoots and controlling the duration of the overshoots/undershoots. Invention III has separate utility such as measuring a quiescent current on a device under test. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Alan Stewart on July 5, 2005 a provisional election was made without traverse to prosecute the invention of group I claims 1-10. Affirmation of this election must be made by applicant in replying to this Office action.

Claims 11-21 are withdrawn from further consideration by the examiner, 37

CFR 1.142(b), as being drawn to a non-elected invention.

### ***Specification***

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The current abstract is too short and needs to be corrected.

### ***Claim Objections***

3. Claims 2 and 6 are objected to because of the following informalities:

- In regard to claim 2, on the second line of the claim "overshoot" is misspelled, as it is missing an 'o'.
- In regard to claim 6, it is unclear where it is explained or shown (in the specification or drawings) that the reference value of the comparator circuit is determined when processing the request.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 and 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Chetlur et al. (6535014).

In regard to claim 1, Chetlur et al. discloses processing a request for a voltage overshoot or undershoot (col 3 line 17-23, controllable as to produce and overshoot/undershoot when needed) to determine a plurality of inputs based, in part, on a plurality of waveform parameters (col 3 line 32-44); applying the plurality of inputs to a waveform generation circuit; and generating a voltage waveform in accordance with at least one of the parameters (col 3 line 29-44; fig 1 also shows a waveform being produced).

In regard to claims 2 and 3, Chetlur et al. discloses wherein the waveform generation circuit comprises an overshoot and undershoot generation circuit, and the waveform parameters comprise voltage overshoot/undershoot parameters (col 3 line 16-32).

In regard to claim 4, Chetlur et al. discloses where the waveform parameter consists of a at least frequency (col 3 line 29-32 or col 5 line 6-8).

In regard to claim 5, Chetlur et al. discloses where the request comprises determining a frequency (frequency is controlled so it must be known/determined, the determined frequency value is shown in fig 5, y-axis).

In regard to claim 8, Chetlur et al. determines a voltage value to apply to a voltage controlled oscillator (abstract; fig 1, Vdd and Vss are applied to VCO).

In regard to claim 9, Chetlur et al. discloses where processing the request further comprises processing the request based, in part, on the characteristics of the waveform generation circuit (col 4 line 5-9).

In regard to claim 10, Chetlur et al. discloses where a circuit reliability model is generated for a device coupled to the waveform generation circuit (figs 3 and 4; col 5 line 28-39).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chetlur et al. (6535014).

Chetlur et al. discloses wherein when processing a request a reference value is determined or known (abstract; generated signal is generated based on being greater, less, or equal to a reference signal).

Chetlur et al. doesn't specifically disclose wherein there is a comparator.

It would have been obvious to one with ordinary skill in the art at the time the invention was made for Chetlur et al. to include a comparator in order to verify the existence of overshoots/undershoots to ensure proper tests.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chetlur et al. (6535014) in view of Hanai et al. (6522126).

Chetlur et al. determines a voltage value to apply (voltage is determined to be overshoot/undershoot-abstract, values seen in fig 3 and 4).

Chetlur et al. lacks wherein processing the request comprise applies the voltage value to a delay circuit.

Hanai et al. discloses determining a voltage value to apply to a delay circuit while testing semiconductor devices (col 2 line 66 – col 3 line 11).

It would have been obvious to one with ordinary skill in the art at the time the invention was made for Chetlur et al. to apply the voltage value to a delay circuit as taught by Hanai et al. in order to have a high speed waveform (col 3 line 8-11).

### ***Conclusion***

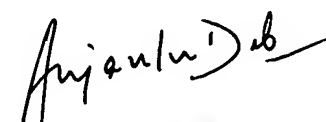
7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Takagi et al. (5436559) discloses a semiconductor reliability test that generates an overshoot/undershoot.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Natalini whose telephone number is 571-272-2266. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jeff Natalini



**ANJAN DEB**  
**PRIMARY EXAMINER**